

# Differential pressure switch for air, flue and exhaust gases

## AA-A1...

**DUNGS**<sup>®</sup>  
Combustion Controls



### Approvals

#### UL Recognized

- UL 353
- File # MH 16628

#### CSA Certified

- CSA C22.2 No. 14
- File # 201527

#### FM Approved

- Class 3510, 3530
- File # J.I. 1T7A8.AF

#### Commonwealth of Massachusetts Approved Product

- Approval code G3-0106-191
- Air pressure switch for differential, vacuum or pressure

#### Codes and Standards

This product is recommended for installations covered by but not limited to NFPA 85, NFPA 86, UL 795, CSD-1, ANSI Z83.4, ANSI Z83.18, ANSI Z21.13, and CSA B149.3.

#### DUNGS is an ISO 9001 manufacturing facility.



### Description

AA-A1... differential pressure switches are factory set, compact pressure switches for automatic burner controls. Available with hose connections.

AA-A1... differential pressure switches are suitable for making and/or breaking a circuit when the medium pressure changes relative to the set point.

### Application

Differential pressure monitoring in firing, ventilation and air-conditioning systems. The AA-A1... can be used as a pressure, vacuum or differential pressure switch for air and non-aggressive gases. Not suitable for natural gas, propane, butane and other combustible gases.

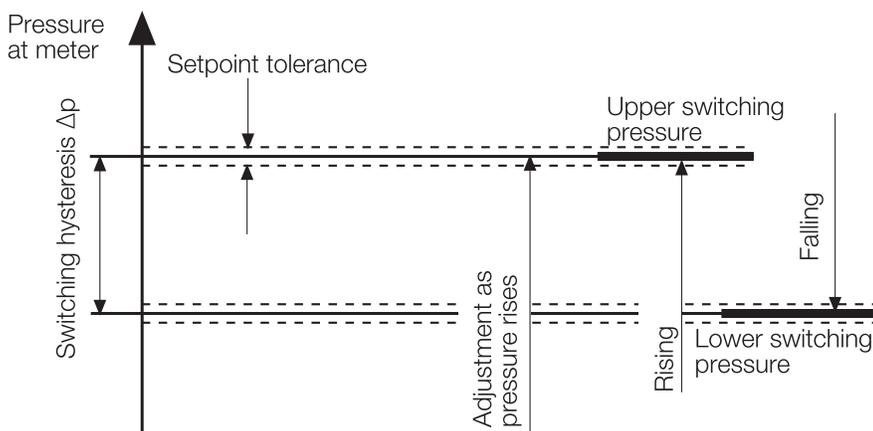
**AA-A1...** SPDT differential pressure switch in pressure and vacuum ranges. The differential pressure acts via the diaphragm against the force of the setting spring on the micro-switch. The pressure switch operates without any auxiliary power.

## Specifications

Max. operating pressure	1.5 PSI (103 mbar)		
Pressure connection	0.16" (4 mm) diameter hose connection		
Temperature range	Ambient temperature	-40 °F to +140 °F (-40 °C to +60 °C)	
	Medium temperature	-40 °F to +140 °F (-40 °C to +60 °C)	
Materials	Housing:	Polycarbonate	
	Switch:	Polycarbonate	
	Diaphragm:	NBR-based rubber	
	Switching contact:	Silver (Ag)	
Electrical ratings	AC eff. min.	24 V	max. 250 V
	DC min.	24 V	max. 48 V
Current ratings	AC 5 A resistive @ 120 VAC		
	AC 2.5 A inductive @ 120 VAC		
	DC min. 20 mA @ 24 VDC		
	DC max. 1 A @ 48 VDC		
Electrical connection	1/4 x 1/32" (6.3 x 0.8 mm) flat male terminals		
Enclosure rating	Standard: No NEMA Type rating (no cover)		
	NEMA Type 1 with 217-045 cover		
	NEMA Type 12 with 225-816 cover		
Setting tolerance	Tolerance as per specification		
Installation position	Any, as per specification. The setting point changes by approx. $\pm 0.2$ in. W.C. if the mounting position is different than the setting position.		

### Definition of switching hysteresis $\Delta p$

The pressure difference between the upper and lower switching pressures.



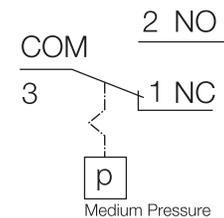
### AA-A1... switching function

#### As pressure rises:

1 NC opens, 2 NO closes

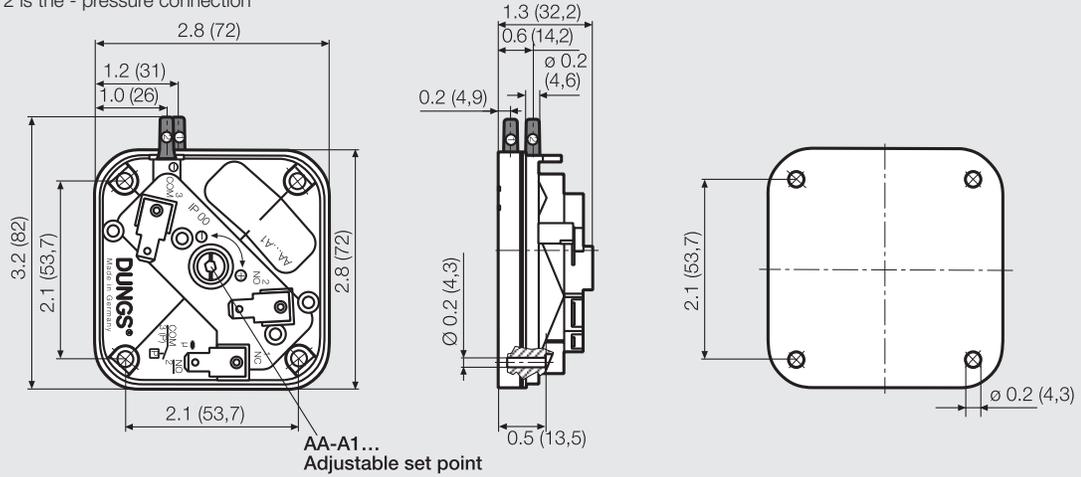
#### As pressure falls:

1 NC closes, 2 NO opens



## Dimensions inch (mm)

1 is the + pressure connection  
2 is the - pressure connection

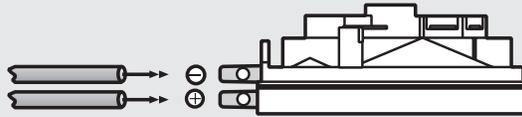


**Height with NEMA Type 12 cover: 1.80 (45,6)**

## Pressure connection

**Connection p2 (-) = lower pressure**

**Connection p1 (+) = higher pressure**



**Differential pressure switch  
for air, flue and exhaust gases**

**AA-A1...**



Type	Version	Description	Order No.	Factory setting range in. W.C.	Switching hysteresis in. W.C.
<b>AA-A1-0-...</b>	AA-A1-0-2	No cover	216-788A	0.16 - 1.2	≤ 0.14
	AA-A1-0-3	No cover	216-752A	0.4 - 4	≤ 0.20
	AA-A1-0-4	No cover	216-867A	1 - 20	≤ 0.40
<b>AA-A1-3-...</b>	AA-A1-3-2	Includes NEMA Type 12 cover and 1/2 NPT conduit connection	216-788CA	0.16 - 1.2	≤ 0.14
	AA-A1-3-3	Includes NEMA Type 12 cover and 1/2 NPT conduit connection	216-752CA	0.4 - 4	≤ 0.20
	AA-A1-3-4	Includes NEMA Type 12 cover and 1/2 NPT conduit connection	216-867CA	1 - 20	≤ 0.40

**Accessories for pressure switch**

**Order No.**

NEMA Type 1 Cover

217-045



Shown with NEMA Type 1 Cover

NEMA Type 12 cover with 1/2 NPT conduit connection

225-816



Shown with NEMA Type 12 Cover

Mounting plate (flat plastic)

230-301

We reserve the right to make any changes in the interest of technical progress.

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